

Both of these beams 1308 and 1309 are typically of IR light so as to be detectable by the sensors 40. Once detected, signals are sent from the sensors 40 to the control unit 1000, that processes these signals and controls the drive system 1040 to maintain the apparatus 20 in the proper portion of the room, here portion QQ.

While an autonomous robot or machine that functions as a vacuum cleaner has been shown and described above, this is exemplary only. The above-disclosed subject matter can also be applied with and adapted for other robots or autonomous machines, that perform various tasks, including cleaning, sweeping, polishing, lawnmowing, gardening, earthmoving, etc.

The methods and apparatus disclosed herein have been described with exemplary reference to specific hardware and/or software. The methods have been described as exemplary, whereby specific steps and their order can be omitted and/or changed by persons of ordinary skill in the art to reduce embodiments of the present invention to practice without undue experimentation. The methods and apparatus have been described in a manner sufficient to enable persons of ordinary skill in the art to readily adapt other commercially available hardware and software as may be needed to reduce any of the embodiments of the present invention to practice without undue experimentation and using conventional techniques.

While preferred embodiments of the present invention have been described, so as to enable one of skill in the art to practice the present invention, the preceding description is intended to be exemplary only. Moreover, the embodiments and components thereof are exemplary. This description should not be used to limit the scope of the invention, which should be determined by reference to the following claims.